

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P243772

Luminaire Tested: **S125RDR-H1270D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243772
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H1270D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4449.2 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

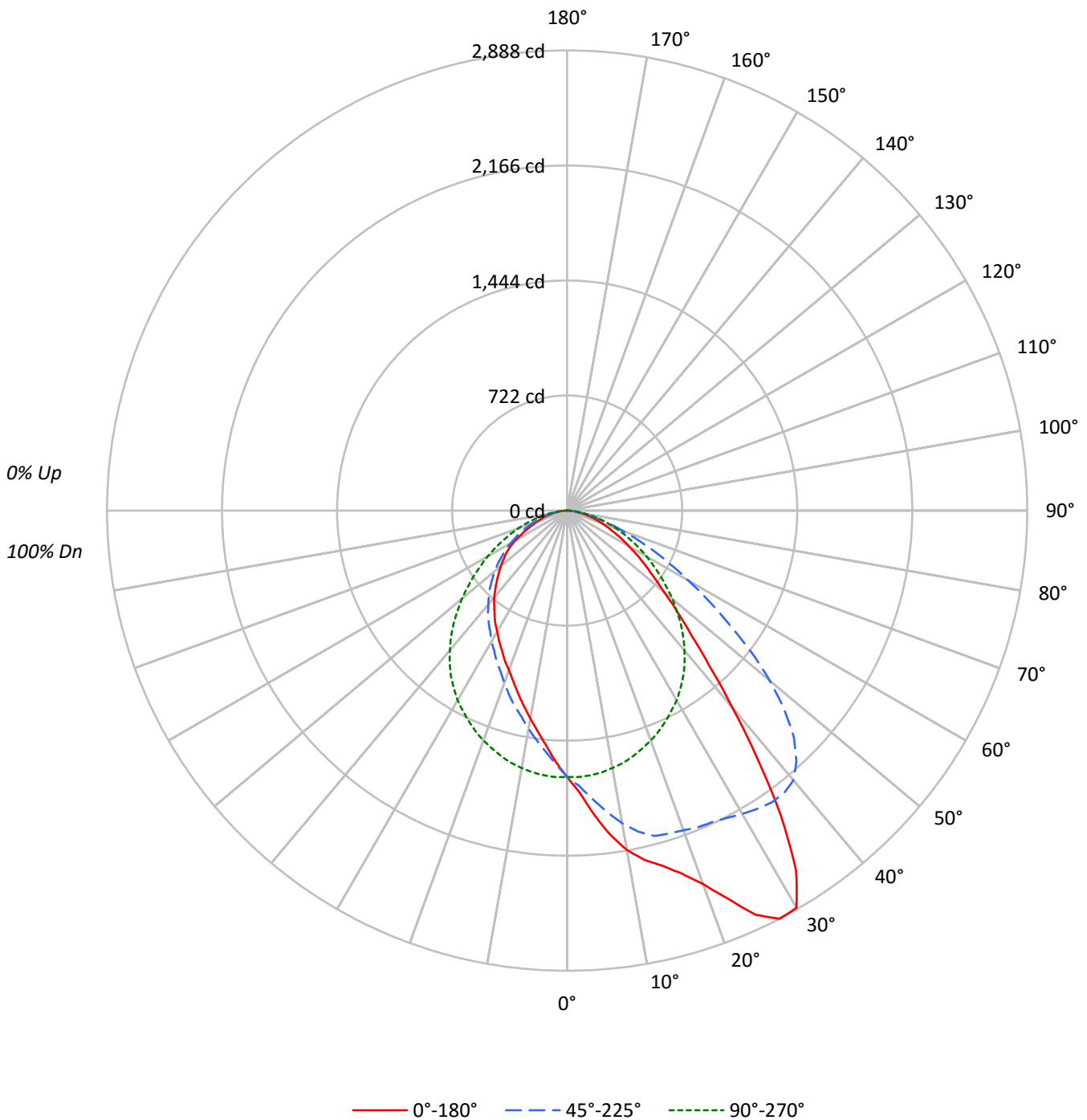
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48					48			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33					33			
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11882	11882	11882
5°	13639	11899	10584
10°	15605	11840	9568
15°	16974	11745	8750
20°	18861	11611	8062
25°	21948	11446	7590
30°	23632	11277	7202
35°	20302	11025	6890
40°	14957	10627	6605
45°	11046	10134	6263
50°	8752	9528	6011
55°	7393	8830	5783
60°	6370	8179	5352
65°	5530	7447	4660
70°	4848	6818	4077
75°	4114	5970	3858
80°	3201	4993	3201
85°	2813	4004	2919



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.9	3.6
10°-20°	476.1	10.7
20°-30°	759.3	17.1
30°-40°	922.0	20.7
40°-50°	830.8	18.7
50°-60°	638.9	14.4
60°-70°	414.6	9.3
70°-80°	199.5	4.5
80°-90°	47.2	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1396.3	31.4
0°-40°	2318.3	52.1
0°-60°	3787.9	85.1
0°-90°	4449.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4449.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1672	1672	1672	1672	1672	
5°	1912	1816	1668	1521	1484	190
15°	2307	2114	1596	1271	1189	661
25°	2799	2157	1460	1046	968	1280
35°	2340	2236	1271	858	794	1431
45°	1099	2012	1008	684	623	873
55°	597	1236	713	499	467	541
65°	329	601	443	317	277	330
75°	150	204	217	155	140	161
85°	34	36	49	39	36	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8
2.5°	1768.5	1775.2	1769.9	1773.2	1767.9	1765.2	1758.6	1748.7	1738.7	1729.4	1728.8
5°	1911.7	1910.4	1905.1	1897.8	1892.5	1879.2	1872.6	1850.1	1834.8	1816.3	1807.0
7.5°	2048.3	2045.0	2037.0	2027.1	2022.4	2005.2	1986.6	1958.1	1934.3	1905.1	1883.2
10°	2162.3	2161.6	2155.7	2149.0	2131.1	2111.9	2094.0	2064.2	2028.4	1991.9	1961.4
12.5°	2245.8	2242.5	2235.2	2223.9	2209.4	2196.1	2172.2	2145.1	2101.3	2064.2	2022.4
15°	2306.8	2305.5	2294.9	2290.9	2262.4	2243.8	2212.0	2184.8	2151.0	2113.9	2068.8
17.5°	2387.7	2390.3	2381.0	2358.5	2332.7	2304.1	2259.1	2214.7	2167.6	2124.5	2088.1
20°	2493.7	2487.1	2471.2	2444.0	2397.6	2362.5	2317.4	2262.4	2198.8	2135.1	2082.7
22.5°	2635.6	2628.3	2603.1	2570.0	2511.6	2447.3	2378.4	2296.2	2223.3	2150.4	2081.4
25°	2798.7	2784.7	2747.6	2711.8	2629.0	2560.7	2457.9	2359.8	2253.8	2157.0	2079.4
27.5°	2887.5	2887.5	2870.2	2831.1	2765.5	2664.8	2560.0	2429.4	2306.8	2174.2	2064.2
30°	2879.5	2874.9	2881.5	2864.9	2822.5	2746.9	2642.9	2505.7	2349.2	2197.4	2065.5
32.5°	2674.0	2676.0	2715.8	2743.0	2764.2	2745.6	2678.0	2554.1	2398.3	2220.0	2060.2
35°	2339.9	2345.2	2415.5	2461.9	2556.7	2611.1	2627.0	2560.0	2420.2	2235.9	2050.9
37.5°	1958.1	1958.1	2039.7	2109.9	2216.0	2349.9	2450.0	2475.2	2406.9	2235.2	2043.0
40°	1612.1	1610.1	1674.4	1760.6	1873.9	2021.8	2170.9	2298.8	2315.4	2209.4	2015.1
42.5°	1319.1	1315.8	1386.1	1433.8	1553.1	1685.0	1883.2	2064.2	2167.6	2129.2	1974.0
45°	1099.0	1096.4	1142.1	1196.5	1280.7	1417.9	1584.3	1785.1	1958.8	2011.8	1897.1
47.5°	933.3	934.7	959.2	1004.9	1076.5	1174.6	1323.8	1510.0	1724.8	1847.4	1800.4
50°	791.5	796.1	814.7	849.1	901.5	980.4	1108.3	1276.7	1497.4	1659.8	1669.8
52.5°	685.4	692.0	711.9	730.5	774.2	829.9	929.3	1075.2	1257.5	1452.4	1522.0
55°	596.6	599.9	611.2	631.1	663.5	709.9	782.2	893.6	1062.6	1236.3	1358.9
57.5°	522.3	522.3	529.6	543.6	569.4	611.2	659.6	751.7	894.2	1051.3	1181.9
60°	448.1	450.8	456.1	471.3	488.5	520.4	567.4	625.8	749.0	880.3	1020.8
62.5°	385.8	390.4	395.7	403.0	418.9	441.5	474.6	528.3	611.2	732.5	857.8
65°	328.8	333.4	334.1	342.7	353.3	371.9	397.1	436.2	505.1	600.6	704.0
67.5°	278.4	280.4	282.4	289.0	299.0	310.9	327.5	356.6	411.0	475.3	576.0
70°	233.3	234.7	235.3	242.6	247.3	257.9	266.5	285.0	319.5	369.2	447.4
72.5°	190.9	188.9	188.3	194.2	196.2	204.8	215.4	228.7	247.3	282.4	340.7
75°	149.8	150.5	151.1	154.4	155.1	159.1	165.7	174.3	183.0	203.5	240.6
77.5°	115.3	112.7	112.7	116.7	118.0	118.7	123.3	127.9	132.6	144.5	159.1
80°	78.2	79.5	79.5	79.5	80.2	81.5	84.2	88.2	91.5	98.8	101.4
82.5°	55.7	55.7	55.0	56.3	57.0	57.7	57.7	57.7	59.7	61.6	64.3
85°	34.5	35.1	33.1	34.5	35.1	35.1	35.1	35.1	37.1	36.5	37.1
87.5°	14.6	15.2	15.2	15.9	15.9	16.6	15.9	16.6	15.9	15.9	16.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8
2.5°	1726.8	1718.8	1714.9	1706.9	1696.3	1689.7	1683.0	1673.8	1666.5	1655.2	1645.3
5°	1790.4	1774.5	1759.9	1740.0	1720.8	1704.2	1687.0	1667.8	1650.6	1631.3	1610.8
7.5°	1861.3	1836.2	1805.7	1770.5	1740.7	1714.9	1685.7	1657.2	1631.3	1600.8	1573.0
10°	1929.6	1889.2	1848.8	1801.7	1757.9	1719.5	1680.4	1640.6	1606.8	1569.0	1534.6
12.5°	1982.7	1944.2	1883.9	1825.6	1768.5	1718.8	1669.8	1621.4	1577.0	1535.2	1494.1
15°	2029.1	1965.4	1914.4	1850.7	1781.1	1713.5	1652.5	1596.2	1542.5	1493.5	1451.7
17.5°	2042.3	1985.3	1929.6	1855.4	1780.5	1703.6	1633.3	1566.4	1506.7	1452.4	1405.3
20°	2041.0	1983.3	1923.0	1852.1	1772.5	1688.3	1610.1	1535.2	1467.6	1405.3	1354.9
22.5°	2021.1	1965.4	1904.4	1832.8	1752.0	1665.1	1582.9	1500.1	1426.5	1361.5	1309.8
25°	1999.9	1929.6	1866.0	1793.7	1716.8	1636.6	1549.1	1459.6	1382.8	1315.1	1256.8
27.5°	1981.3	1897.1	1818.9	1748.0	1669.1	1596.9	1510.0	1416.6	1337.7	1266.8	1206.4
30°	1951.5	1862.7	1767.9	1690.3	1614.1	1538.5	1459.0	1374.1	1288.0	1215.7	1155.4
32.5°	1925.6	1813.6	1710.9	1623.4	1547.1	1480.9	1404.6	1323.1	1238.9	1170.0	1105.0
35°	1897.1	1763.2	1655.9	1553.1	1476.9	1404.6	1344.3	1270.7	1187.2	1114.3	1056.0
37.5°	1863.3	1711.5	1588.2	1483.5	1404.6	1330.4	1276.0	1210.4	1134.8	1062.6	1004.9
40°	1825.6	1658.5	1516.7	1408.6	1323.8	1249.5	1203.8	1145.4	1081.1	1009.6	955.9
42.5°	1777.8	1602.2	1451.7	1333.7	1239.6	1172.6	1126.9	1078.5	1019.5	957.2	898.9
45°	1717.5	1531.9	1374.1	1249.5	1156.7	1091.8	1044.0	1008.2	961.2	902.8	847.8
47.5°	1643.9	1458.3	1294.6	1165.3	1075.8	1013.5	969.1	933.3	897.5	847.2	794.8
50°	1546.5	1374.1	1217.0	1085.1	990.3	930.0	890.2	861.7	829.3	788.2	740.4
52.5°	1439.1	1279.3	1125.6	1002.3	910.8	850.5	809.4	785.5	761.0	727.2	686.1
55°	1314.5	1184.6	1038.1	917.4	827.9	768.3	735.8	712.6	692.0	666.2	631.7
57.5°	1182.6	1068.6	941.3	829.9	745.7	689.4	660.9	641.7	624.4	605.9	577.4
60°	1044.0	963.2	842.5	740.4	666.9	620.4	593.3	575.4	559.5	544.2	523.0
62.5°	899.5	832.6	742.4	655.6	590.0	546.2	526.3	511.1	494.5	481.2	466.0
65°	753.0	714.6	652.3	570.7	510.4	474.6	455.4	442.8	434.8	419.6	407.7
67.5°	619.8	598.6	545.5	490.5	444.1	411.6	393.7	384.5	375.8	368.6	355.3
70°	493.2	477.9	447.4	408.3	371.9	344.0	330.8	328.1	316.2	308.9	302.3
72.5°	375.8	371.9	346.7	329.4	308.9	287.0	277.1	271.8	263.8	257.2	254.5
75°	267.1	273.1	265.1	256.5	246.6	228.7	220.1	217.4	210.1	208.1	204.8
77.5°	182.3	190.9	193.6	189.6	184.9	179.0	173.0	170.4	163.1	161.7	159.8
80°	114.7	127.3	131.9	131.2	129.3	129.9	122.6	122.0	118.7	116.7	118.7
82.5°	69.6	76.2	84.8	86.8	84.2	85.5	83.5	80.9	80.9	82.2	79.5
85°	37.8	38.4	42.4	45.1	48.4	51.0	48.4	49.1	48.4	48.4	46.4
87.5°	16.6	17.2	17.2	16.6	17.9	19.2	21.9	23.2	22.5	20.5	17.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8	1671.8
2.5°	1637.3	1632.7	1624.7	1618.1	1602.8	1592.2	1590.9	1591.6	1590.2	1588.9	1588.2
5°	1597.5	1582.3	1567.7	1555.1	1537.9	1520.6	1512.7	1509.4	1508.0	1500.7	1504.7
7.5°	1555.1	1531.9	1514.7	1490.8	1470.3	1455.7	1441.8	1435.1	1433.8	1423.9	1421.2
10°	1510.0	1482.2	1456.3	1432.5	1411.9	1391.4	1374.8	1368.8	1360.9	1352.9	1341.0
12.5°	1465.6	1431.1	1402.6	1376.1	1348.3	1325.1	1311.8	1303.2	1293.3	1286.0	1282.0
15°	1412.6	1383.4	1348.3	1319.8	1291.3	1270.7	1252.8	1236.9	1227.6	1221.7	1205.1
17.5°	1364.9	1326.4	1293.3	1266.1	1234.9	1211.7	1193.2	1179.9	1164.0	1152.1	1141.5
20°	1313.8	1274.0	1243.6	1211.1	1179.3	1150.7	1127.5	1116.9	1105.7	1094.4	1088.4
22.5°	1258.8	1224.3	1189.9	1156.1	1122.2	1091.8	1077.2	1061.9	1052.0	1040.7	1032.8
25°	1211.1	1173.3	1138.8	1101.0	1063.9	1046.0	1026.1	1010.9	1002.9	991.7	983.0
27.5°	1160.0	1123.6	1082.5	1043.4	1021.5	991.0	977.7	965.8	955.2	943.9	938.0
30°	1112.3	1069.9	1028.8	998.3	969.8	947.9	935.3	920.7	906.1	900.8	892.9
32.5°	1061.9	1016.2	980.4	949.9	926.0	899.5	887.6	875.7	861.7	855.1	847.8
35°	1009.6	965.1	930.0	902.2	877.6	857.8	844.5	831.9	823.3	813.3	808.0
37.5°	954.5	916.1	882.3	854.4	831.9	816.0	799.4	789.5	777.6	768.3	764.3
40°	902.2	867.7	835.2	809.4	788.8	769.6	755.0	742.4	735.1	727.2	720.5
42.5°	855.1	819.3	791.5	764.3	745.7	727.2	712.6	703.3	690.7	687.4	678.1
45°	804.7	771.6	743.7	718.6	699.3	684.1	666.9	655.6	647.6	639.7	636.4
47.5°	753.7	723.2	697.3	674.1	654.3	637.0	623.8	611.8	603.2	595.9	591.9
50°	704.0	677.5	651.6	629.1	608.5	595.9	580.0	566.8	560.1	552.2	547.5
52.5°	651.6	629.7	601.9	582.7	563.4	546.9	531.0	522.3	515.7	509.1	505.8
55°	602.6	579.4	555.5	534.9	516.4	499.1	486.5	479.9	471.3	467.3	466.7
57.5°	552.2	528.3	508.4	489.9	468.7	455.4	444.1	436.2	428.9	425.6	425.6
60°	497.2	477.9	459.4	438.8	423.6	408.3	396.4	391.1	383.8	382.5	377.8
62.5°	446.8	428.9	411.0	391.8	377.8	362.6	354.0	346.7	342.7	337.4	332.1
65°	394.4	378.5	361.3	344.7	333.4	316.9	308.9	300.3	295.6	289.7	283.0
67.5°	344.0	328.8	312.9	297.6	288.4	272.4	267.1	256.5	253.2	246.6	240.6
70°	291.0	280.4	267.8	252.6	244.6	232.0	226.7	216.8	211.5	207.5	204.2
72.5°	245.3	235.3	220.7	210.8	200.9	192.9	184.3	179.6	175.0	171.7	171.0
75°	200.2	187.6	179.0	169.7	163.1	155.1	151.1	147.8	145.8	143.8	141.9
77.5°	153.1	147.8	139.2	129.9	124.6	121.3	118.7	117.3	115.3	114.7	112.7
80°	114.0	106.7	101.4	98.1	94.1	91.5	89.5	84.8	82.2	80.9	79.5
82.5°	75.6	73.6	69.6	66.3	63.0	62.3	60.3	59.0	58.3	58.3	57.7
85°	45.7	40.4	40.4	39.8	39.8	39.1	37.8	37.8	36.5	38.4	38.4
87.5°	18.6	18.6	17.2	17.2	17.9	16.6	15.9	15.9	15.9	15.2	15.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243772

CATALOG NUMBER: S125RDR-H1270D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1671.8	1671.8	1671.8	1671.8
2.5°	1588.2	1584.9	1585.6	1581.6
5°	1497.4	1495.4	1488.8	1483.5
7.5°	1414.6	1406.0	1405.3	1400.0
10°	1337.0	1329.1	1325.1	1325.7
12.5°	1269.4	1260.8	1260.8	1255.5
15°	1197.1	1188.5	1189.9	1189.2
17.5°	1137.5	1131.5	1126.9	1122.9
20°	1079.2	1071.9	1069.2	1065.9
22.5°	1025.5	1020.2	1020.8	1020.8
25°	974.4	975.1	969.1	967.8
27.5°	929.3	928.0	926.7	924.0
30°	886.9	881.6	880.3	877.6
32.5°	843.2	842.5	837.2	839.2
35°	798.8	796.8	795.4	794.1
37.5°	757.7	753.7	753.0	751.7
40°	715.9	714.6	708.6	711.9
42.5°	670.8	668.2	668.2	668.2
45°	633.0	625.8	625.8	623.1
47.5°	590.6	588.0	586.6	582.0
50°	548.9	544.9	543.6	543.6
52.5°	505.8	505.1	506.4	503.8
55°	468.0	468.7	468.0	466.7
57.5°	426.9	423.6	423.6	424.2
60°	377.8	377.8	379.2	376.5
62.5°	330.8	329.4	324.8	323.5
65°	282.4	277.1	276.4	277.1
67.5°	239.3	237.3	234.0	234.7
70°	202.2	201.5	198.2	196.2
72.5°	169.0	169.0	167.0	167.0
75°	141.2	139.9	139.2	140.5
77.5°	108.7	105.4	106.7	104.7
80°	78.9	80.2	78.9	78.2
82.5°	58.3	57.0	57.7	57.0
85°	37.1	35.8	36.5	35.8
87.5°	15.2	15.9	15.9	14.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)